

Work Order ID 67788

Wednesday, March 30, 2011 11:34:27 AM



Page 1

Item ID: D3488-041

Accept



Setup Start



Revision ID:

Item Name: Blade Fitting Assembly, LH

Stop



Start Date: 3/30/2011 Start Qty: 12.00



Cust Item ID:

Required Date: 4/4/2011 Req'd Qty: 12.00



Customer:

Reference:

Approvals: Process Plan:

Date: 11/03/2011

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								

D3488	Rev B								
-------	-------	--	--	--	--	--	--	--	--

100 DOOSAN LATHE 0.00



DOOSAN LATHE

Doosan

Memo 0.00

Doosan Lathe

1-Turn as per Dwg DSK 101 & Folio FA625 □2-Deburr

110 QC2- Inspect parts off machine FAI/FAIB 0.00



Memo 0.00

Quality Control

120 HAAS CNC VERTICAL MACHINING #1 0.00



Memo 0.00

HAAS CNC vertical machine #1 1-Machine as per Folio FA625 & Dwg D3488 □2-Deburr

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 2

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC2- Inspect parts off machine FAI/FAIB

0.00

B.A 11/04/14

6 φ



QC

Memo

Quality Control

140

QC8- Inspect parts - second check

0.00

mark 11/04/15

6 φ



QC

Memo

Quality Control

150

Chemical Conversion Coat per QSI005 4.I

0.00

6 6 11/04/15



HandFinish

Memo

Hand Finishing

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Work Order ID 67788

Wednesday, March 30, 2011 11:34:27 AM

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Item ID:	D3488-041	Accept		Setup	Start		
Revision ID:						Stop	
Item Name:	Blade Fitting Assembly, LH						
Start Date:	3/30/2011	Start Qty:	12.00		Cust Item ID:		
Required Date:	4/4/2011	Req'd Qty:	12.00		Customer:		
Reference:							
Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:	Stop		

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 Powdercoat	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum <i>M116964.</i>	0.00							<i>6 BK 11-4-20.</i>
Powder Coating	Memo START TIME: <i>11:00</i> COVEN TEMPERATURE: <i>300°</i> FINISH TIME: <i>11:00</i>	0.00							
170 QC	QC3- Inspect Part Finish	0.00							<i>6 of 40 u los/a</i>
Quality Control	Memo	0.00							
180 HandFinish	HandFinishing	0.00							<i>6 of 40 u los/a</i>
Hand Finishing	Memo Install Inserts as per Dwg D3488	0.00							

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 67788

Wednesday, March 30, 2011 11:34:27 AM

Page 4

Item ID: D3488-041

Accept



Setup

Start



Revision ID:

Item Name: Blade Fitting Assembly, LH

Stop



Start Date: 3/30/2011 Start Qty: 12.00



Cust Item ID:

Required Date: 4/4/2011 Req'd Qty: 12.00



Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center ID

190



QC

Quality Control

Operation
Description

QC5- Inspect part completeness to step on W/O

Set Up/
Run Hours

0.00

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

S 4/25/13

(46)

200



Packaging

Packaging

Identify as per dwg & Stock Location: FP-8

0.00

X6 M 4/25/13

210



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

11/16/13

MF
11-05-13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		~WORK ORDER NON-CONFORMANCE (NCR)						
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NOTE: Date & initial all entries

Picklist Print

Page 1

Wednesday, March 30, 2011 11:34:33 AM

Work Order ID: 67788



Parent Item: D3488-041



Parent Item Name: Blade Fitting Assembly, LH

Start Date: 3/30/2011

Required Date: 4/4/2011

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev:A New Issue 06-02-28 JLM

IPP Rev:B As per Rev B 06-03-30 JLM

IPP Rev:C Now On Doosan Lathe JLM Verified BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

ALS7-1032-225



Purchased

No

Each

700.0000

48



INSERT

Location Loc Qty Loc Code

ST282

700

M110768

X24

100896

100

111529

300

111581

300

D6103-003



Manufactured

No

Each

6.0000

12

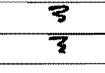
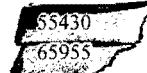


Round Billet, Aluminum

Location Loc Qty Loc Code

MAT043

6



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	67788
Description: Blade Fitting, LH / Turning Detail for D3488-1/-2	Part Number:	D3488-1
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
Ø2.150	+/-0.005	2.147	/		29.02	
Ø2.780	+/-0.005	2.777	/			
Ø3.125	+/-0.010	3.122	/			
Ø3.346	+/-0.010	3.346	/			
0.125 x 45°	+/-0.010 x +/-0.1°	.120	/			
8.000	+0.030/-0.000	8.018	/			
9.250	+/-0.010	9.250	/			
0.188	+/-0.010	.188	/			
R0.032	+/-0.010	.032	/			
R0.062	+/-0.010	.062	/			
Ø0.297	+0.005/-0.001	.299	/			
Ø0.430 X	+/-0.010	.430	/			
0.100	+/-0.010	.100	/			
0.125	+/-0.010	.127	/			
2.620	+/-0.010	2.618	/			
3.500	+/-0.010	3.500	/			
1.005	+/-0.010	1.005	/			
Ø0.484	+0.005/-0.001	.484	/			
1.180	+/-0.010	1.180	/			
3.150	+/-0.010	3.150	/			
3.070	+/-0.010	3.070	/			
R0.063	+/-0.010	.063	/			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	97788
Description: Blade Fitting, LH / Turning Detail for D3488-1/-2	Part Number:	D3488-1
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 2 of 2

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Milling Section						
Ø0.508	+0.006/-0.001	Ø0.509			Vern	6A-01
0.750	+/-0.010	0.754			H-G	31006
1.500	+/-0.010	1.500			Vern	6A-01
11.18	+/-0.030	11.183			H-G	31006
R0.062	+/-0.010	R0.063	✓		R-G	ref.
0.125	+/-0.010	0.130	✓		Vern	6A-01
0.590	+/-0.010	0.592	✓		H-G	31006
0.793	+/-0.010	0.798	✓		"	"
1.351	+/-0.010	1.346	✓		"	"
1.317	+/-0.010	1.320	✓		Vern	6A-01
1.802	+/-0.010	1.802	✓		H-G	31006

Measured by:	B.A	Audited by:	CML	Prototype Approval:	N/A
Date:	11/04/14	Date:	11/04/15	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.03.31	New Issue	KJ/JLM	
B	08.09.19	Reformat P/O D3488-041	KJ/JLM	
C	08.12.02	Dimension 8.000 removed	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: / Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SHOP COPY

RETURN TO

ENGINEERING

UNCONTROLLED COPY

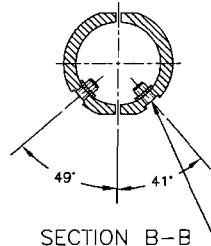
SUBJECT TO AMENDMENT

WITHOUT NOTICE

WORK ORDER

NO. *C-7786*

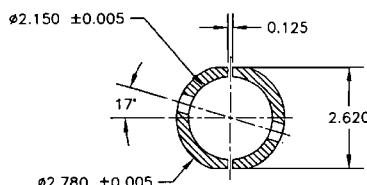
P1 U-0330



SECTION B-B

#0.297
C'BORE $\phi 0.430 \times 0.100$
INSTALL ALS4-1032-225 (OR AKS4-1032-225)
OR ALS7-1032-225 OR AKS7-1032-225)
INSERTS AFTER FINISH
(4 PLACES)

4



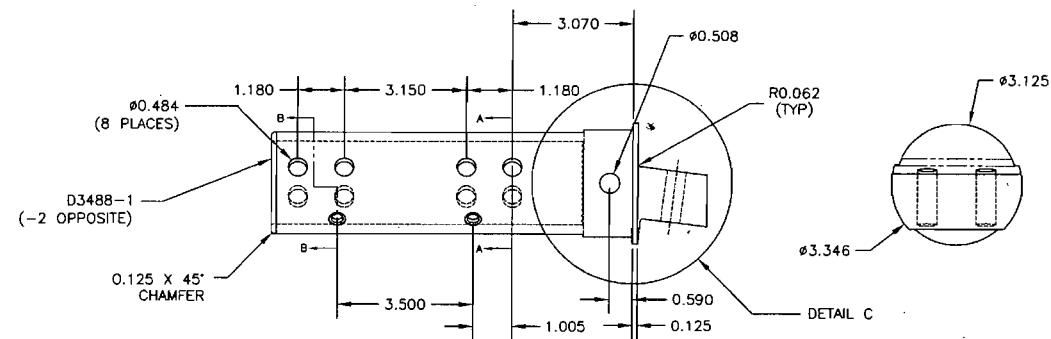
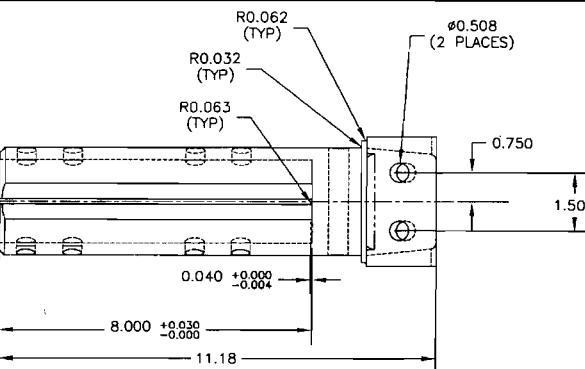
SECTION A-A

D3488-041/-042 BLADE FITTING ASSEMBLY PARTS LIST

QTY	QTY	PART NUMBER	DESCRIPTION
X	X	D3488-041	BLADE FITTING ASSEMBLY (LH)
X	X	D3488-042	BLADE FITTING ASSEMBLY (RH)
1	1	D3488-1	BLADE FITTING (LH)
1	1	D3488-2	BLADE FITTING (RH)
4	4	ALS4-1032-225 or AKS4-1032-225 or ALS7-1032-225 or AKS7-1032-225	INSERT

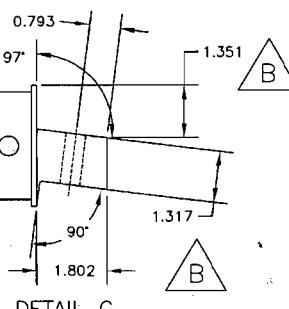
D3488-041/-042 BLADE FITTING

- 1) MATERIAL: MAKE D3488-1/-2 FROM ALUMINUM 7075-T7351 ROUND BAR PER QQ-A-225/9 (REF. DART MATERIAL SPEC M7075T73R)
- 2) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- 3) BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- 4) INSTALL INSERTS AFTER POWDER COAT
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



D3488-041 SHOWN (D3488-042 OPPOSITE)

RELEASED
04-03-04 PH
PER 05
ECN #734



DETAIL C

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OR COPIED OR COMMUNICATED TO ANY OTHER
PERSON WITHOUT WRITTEN PERMISSION FROM
DART AEROSPACE USA, INC.

DESIGN	DRAWN BY	DART AEROSPACE USA, INC.
B	06.03.15	CHANGE THICKNESS
A	05.12.20	NEW ISSUE
CHECKED	APPROVED	DRAWING NO. D3488
DATE	06.03.15	TITLE SCALE BLADE FITTING 1:3

W/O:		WORK ORDER CHANGES					
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